

Fig. 1

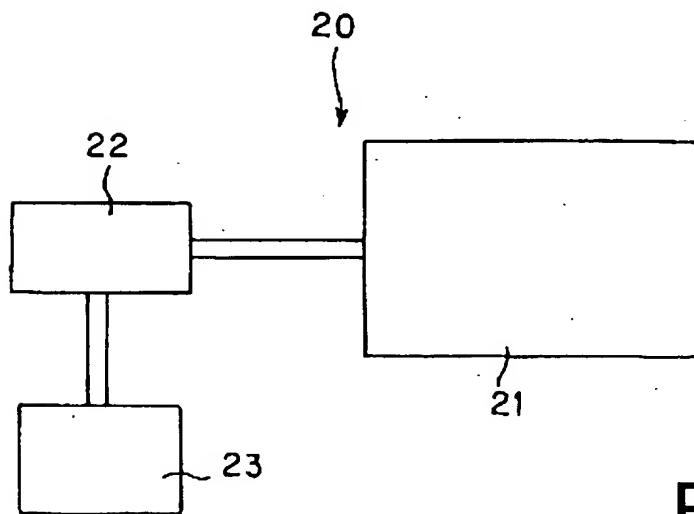
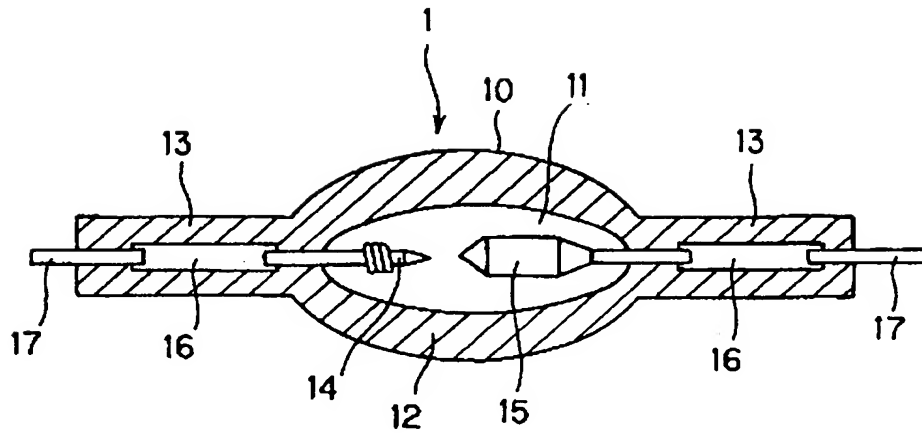


Fig. 2

Fig. 3

	Hydrogen concentration (wt-ppm)	Al concentration (wt-ppm)	OH concentration (wt-ppm)	Blackening and milky opacification of arc tube	Illuminance maintenance factor	Cracks in arc tube
Example 1	1.5	3.1	0.5	○	○	○
Example 2	0.6	6.7	0.5	○	○	○
Example 3	2.7	20	0.6	○	○	○
Example 4	5.5	18.2	0.7	○	○	○
Example 5	17	6.5	0.4	○	○	○
Example 6	61	27.1	0.3	○	○	○
Example 7	22	10.2	0.3	○	○	○
Example 8	0.1	7.5	0.5	○	○	○
Example 9	35	19.5	0.5	○	○	○
Example 10	0.3	12.6	0.5	○	○	○
Example 11	98	3.7	0.6	○	○	○
Example 12	0.38	4.4	0.5	○	○	○
Example 13	77	2	0.5	○	○	○
Example 14	0.2	20	0.5	○	○	○
Example 15	290	17.8	0.5	○	○	○
Example 16	180	11.6	0.5	○	○	○
Example 17	124	18	0.9	○	○	○
Example 18	52	30	0.6	○	○	○
Example 19	290	28	1	○	○	○

Fig. 4

	Hydrogen concentration (wt-ppm)	Al concentration (wt-ppm)	OH concentration (wt-ppm)	Blackening and milky opacification of arc tube	Illuminance maintenance factor	Cracks in arc tube
Comparative example 1	0.05	11.9	0.5	○	○	×
Comparative example 2	0.08	13.7	0.5	○	○	×
Comparative example 3	0.02	8.5	0.5	○	○	×
Comparative example 4	320	14.5	0.5	×	×	○
Comparative example 5	520	17.3	0.5	×	×	○
Comparative example 6	465	11.8	0.5	×	×	○
Comparative example 7	54	1.5	0.5	○	○	×
Comparative example 8	28	35	0.5	Δ	×	○
Comparative example 9	2.5	40.5	0.5	Δ	Δ	×
Comparative example 10	13	31	0.5	○	Δ	○
Comparative example 11	220	52	0.5	Δ	×	×
Comparative example 12	15	8.5	6	○	Δ	×
Comparative example 13	33	14.5	2	○	Δ	×
Comparative example 14	45	17.3	1.5	○	Δ	○
Comparative example 15	23	7.5	10	Δ	Δ	×